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BIRDS OF THE OLYMPIC PENINSULA, WASHINGTON.¹

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THE Olympic peninsula extends from Gray's Harbor, latitude 46° 56' north, to the Strait of Juan de Fuca, latitude 48° 24' north. The region, as to the habitation of birds, divides itself into parts or belts: the islands along the coast; the coastal mainland region; the middle-upland country up to an elevation of 4000 feet; and the mountain district. As the observer will note, the high mountains form a circular area forty miles in diameter and 6000 to 8000 feet in height in the east-central part of the peninsula. From these mountains there extends northwestward to Cape Flattery a ridge ranging from 4000 to 1000 feet in elevation as one approaches the cape. The coastal strip is about twelve miles wide, skirting both the ocean and strait. The middle-upland region lies between the coastal strip and the mountain district. The whole mainland country is yet settled sparsely, hence is a paradise for birds. A dense underbush covers the land everywhere, so that the country might be said to be a jungle. For this reason birds in the interior region are hard to find, but along the coast and in the island districts they are in evidence.

The zones have a varied bird life. Mostly snow birds are found in the mountain zone. The middle upland zone has the meadow lark, robin, mourning dove, and so on. The lowland belt has a mixture of both land and sea birds, though as a rule only the land birds and ducks nest in this region. The island birds are practically all sea fowl.

On account of their prominence in bird life, the islands of the Pacific coast will receive further mention. They naturally divide themselves into three large segregations. Each of these segregations was created a bird reserve by executive order of President Theodore Roosevelt; and from the time of the issuing of said order till October 3, 1909, the author was supervising warden of these reserves. It was while in charge of these that he made the observations hereinafter recorded. The reserves are designated by the executive order as Copalis Rock reserve, Quillayute Needles reserve, and Flattery Rocks reserve. Copalis Rock reserve is near Grenville (Tahola), about thirty miles north of Gray's Harbor.

1. The only treatise that mentions the birds of this region, so far as the writer can learn, are Dr. W. Leon Dawson's "Birds of Washington," and the same author's "Bird Colonies of the Olympiades," in *The Auk*, for April, 1908, vol. XXV, pp. 153-166.

The Quillayute Needles reserve is in the vicinity of LaPush, Wash. The Flattery Rocks reserve, which also includes the Point of Arches group and Tatoosh island, at Cape Flattery, extends along the coast from the vicinity of the Ozette Indian village, some eighteen miles up the coast from LaPush, to Cape Flattery and the entrance to the Strait of Juan de Fuca. The islands of these reserves are the residual part of a sunken part of the continent. The country rock of the Copalis group is Cretaceous; of the Quillayute Needles group, lower Pliocene to possibly Miocene. The main Flattery segregation is likely cretaceous, and the Point of Arches is still older, while Tatoosh island belongs to the Clallam formation of rocks of the strait region and is Oligocene-Miocene in age.

The islands of this coast were all islands at least even as early as in Pliocene times. In the Pleistocene they were submerged. When, again, they lifted their heads above the surf after the troubled glacial epoch, each one had a Pleistocene cap of gravel and sand. Weathering, however, has removed this cap from all but the largest islands. It is in this Pleistocene cap that many of the burrowing fowls have their hidden homes.

Below is a description of the various islands of the respective reserves, beginning with the reserve farthest to the north:

FLATTERY ROCKS RESERVE.

The Flattery Rocks reserve comprises the following islands and groups of islands: Tatoosh island, Fuca's Pillar group, Point of Arches group, and Flattery Rocks proper.

Tatoosh island is situated at the entrance of the Strait of Fuca, on the western or American side. It is a low-lying, flat-topped, grass-bush-covered island, composed of conglomerate rocks, while near it are many pinnacles and points composed of the same rock formation. The main island is occupied by the government light-house and wireless station at the entrance of the strait.

Fuca's Pillar group lies in longitude $124^{\circ} 43' 30''$ west, latitude $48^{\circ} 22' 30''$ north. They contain a series of precipitous rock-points and pillars off Cape Flattery, of which Fuca's pillar is the most prominent. Most of the islands of the group are too much worn down to admit of safe nesting. The pillar and its immediate neighbors and the adjacent mainland promontory furnish good nesting places. These points and pillars, together with the adjacent headland, have been honeycombed and countersunk in a maze of places, hence are the best of nesting places.

The *Point of Arches group* is in longitude $124^{\circ} 43'$ west, latitude $48^{\circ} 15'$ north. The islands of this group extend from the shore

line at the Point of Arches seaward in two parallel lines to a distance of about a half a mile. They are conglomerate in formation and the oldest rocks in age along the Pacific coast of Washington. They comprise about thirty under-cut and arched shafts and blocks. They stand out in bold and rugged outline. Bird colonies appear only on the western and northwestern members of the group, being densest in bird population on "Silersides."

Father and Son are two islands rising from the same base, 150 feet and 30 feet in height, respectively. They are situated in longitude $125^{\circ} 43'$ west. They are off shore about one-half mile. The two together comprise about a half acre in area. They are guano-covered shafts, with practically no vegetation.

Flattery Rocks proper are four islands of 200 feet in height just off shore at high tide; at least the easternmost one is connected with the mainland by a very rocky peninsula at low tide. They run in a west-northwest line from the Ozette Indian village; longitude $124^{\circ} 45' 6''$, latitude $48^{\circ} 10' 45''$ north. In total area they may be said to aggregate some thirty acres. The two nearest the shore are wooded, but the two others are steep-walled and barren. It is on these that the birds nest.

QUILLAYUTE NEEDLES RESERVATION.

The islands of the Quillayute Needles reservation, beginning at the north limit are: White Rock, the Jagged islet-Carrol islet group, Cape Johnson group, Doh-od-a-a-luh, Cake Rock, the James island group, Quillayute Needles proper, the Giants' Graveyard, Round islet, Alexander island, North Rock, and Destruction island.

White Rock, called "Peechwah" by the Indians, is located in longitude $124^{\circ} 43' 20''$ west, latitude $48^{\circ} 8' 10''$ north. It is about 140 feet in height. Its walls are abrupt, though scalable. Its grass-covered top aggregates probably half an acre.

Carrol islet is called by the Indians "Habaah-aylash." It is about two miles north from Jagged islet, to which group it belongs. It is located in longitude $124^{\circ} 43' 30''$, latitude $48^{\circ} 10'$. It is a huge island, covered with giant trees and underbrush, while projecting cliffs and benches add to making it an ideal bird home. In elevation it exceeds 250 feet, and in area it aggregates 15 acres. It is a bird paradise.

Paahwooke is an inaccessible pinnacle of 125 feet in height, located about a hundred yards nearly west of Carrol islet.

Jagged islet is an islet in the middle stages of decay. Its central-eastern part reaches an elevation of some 70 feet. It is barren of vegetation, but its fantastically eroded sandstone makes up

in picturesqueness for its barrenness. It is composed of a long ridge of 250 yards in length, running in an east-and-west direction. From this ridge a long spur runs off to the northward. The islet contains about three acres. Its lower levels are just above tide. This lower area is the basking place for hundreds of sea-lions. The central high area is a bird home.

Wishaloolth is east-southeast of Jagged islet, about half way between it and the shore. It is about 21 acres in area. It is 200 feet high and 300 yards long. It is further characterized by its having its strata of metamorphic conglomerate rock dipped exactly opposite to the dip of the rocks of its sister islands, they dipping southwestward. Its sides are sharply sloping, but are covered with shallow earth and guano and the whole covered with grass and low flowering plants and a few scattering shrubs. Near this islet and between this islet and the shore are several smaller islets, composed of the conglomerate rock, but with strata dipping northwestward.

The *Cape Johnson group* comprises about fifteen rocky points and peaks extending from the shore line westward to a distance of one-half to three-fourths mile, in longitude $124^{\circ} 42'$, latitude $47^{\circ} 58'$. There are but few birds on these islands except on the most westerly ones.

Doh-od-a-a-luh is about one mile off shore, in longitude $124^{\circ} 41'$ west, latitude $47^{\circ} 57'$ north. It is a little less than an acre in area. It is quite steeply walled. It runs to a high point, but has several outlying spurs, which, together with the less perpendicular slopes, are covered with wire grass.

Cake island, or Chah-chah-lakh-hoos-set, to use the Indian name, is off shore about two and one-half miles from the mainland to the eastward and some three and one-half miles north of the Indian village of LaPush, in longitude $124^{\circ} 41' 30''$, latitude $47^{\circ} 55' 50''$ north. It comprises an area of about a dozen acres. It is almost elliptical in shape, with practically perpendicular walls of a height of 120 feet. It has an oval top densely covered with brush, under which there is a thick layer of turf and guano. It is unsalable at the present time, hence a bird paradise.

The *James island group* comprises several islands, principal of which is James island. Four of the so-called islands are only peninsulas at low tide, being then connected with the mainland. The off-shore islands here are small. James island and three other islands of the group are forested, the former densely forested. This island is easily accessible, though high and for the most part

steep-walled. It contains over forty acres. It was on this island that the Quileute Indians had their stockade village in the old times and where they were making a last stand against the ravages of the Makahs at Cape Flattery. The old village site is to-day a garden. On account of the close proximity of these islands to the shore, they are not safe nesting places. Some Baird cormorants, however, venture to make nests on all the islands of the group, while several species of birds, including a Peale falcon, inhabit Chaa-uh, a few rods from James island.

The *Quillayute*² *Needles group* proper lies in a line circling somewhat to the northwestward from Tealwhat Point, a head of land that extends into the ocean about a mile southwestward from the agency office at LaPush. These islands, with James island to the northwestward, inclose Quillayute bay to the west of the Indian village. They are exceedingly picturesque, and range from pinnacle, oval sugar-loaf to flat-topped. In appearance from the agency quarters they remind one much of the volcanic buttes of New Mexico, especially those of the Cabezón group. The two largest islands are each over 100 feet in height, and each has a top area of about an acre. The easternmost of these two, called Keepsoostahl by the Indians, is the higher island. It is unscalable. The western island has precipitous walls except to the southeast, where it runs down toward the sea in shed-roof style. It is there easily scalable. The Coast and Geodetic Survey chart No. 6400 calls this island "Huntington Rock," but the Indians call it "Dhoyuatz," a shortened form of Dhuoyuachtal (the catch-petrel-place). In the summer of 1907 the writer, in company with Dr. W. Leon Dawson and a Professor Jones, spent a night on this island. From our observations we decided there were, besides other sea fowl, at least 40,000 petrels on this island alone. The night birds were so numerous that they would knock each other down on us in their rapid flight.

The *Giant's Graveyard*, longitude 124° 34' west, latitude 47° 30' 30" north, comprises a group of jagged pinnacles of shore rock, ranging from just above the water to an elevation of 160 feet. They number some twenty islands. They represent the last stages of erosion of lower Pliocene (and Miocene) sandstone ledges that were elevated in a previous geological age to nearly a vertical position. The principal rock of this group is called Ghost Rock. It stands out in bold outline. It is narrow at base and higher than wide. It is a cormorant home and is everywhere white with excre-

2. The Indian office spells the word "Quileute"; geographers, "Quillayute."

ment. Gulls and Baird cormorants and scattering pairs of block oyster-catchers also inhabit the other islands of this group.

Round islet is a rounded mass of rock about 100 feet in height. It is off shore to the southwest about three-fourths of a mile from To-leak Point, longitude $124^{\circ} 34'$ west, latitude $47^{\circ} 49' 40''$ north. It is domed at top and is covered with a dense vegetation of brush and coarse grass. It aggregates probably an acre in area.

Alexander island has a ten-acre top. It is off shore about two miles, in longitude $124^{\circ} 30' 30''$ west, latitude $47^{\circ} 47' 40''$ north. It is roofed with a conglomerate series, which in the interior-continental region seems to be the dividing line between the Miocene and the Pliocene formations. It is topped with green upon a thick turf; grass, brush and dwarf spruce trees abound on it. In height it exceeds 110 feet. It has a sloping approach on the south, is perpendicularly walled on the north, and has a deep embayment on the south, being steep-sided on this side also.

North Rock is off shore about two miles, in longitude $124^{\circ} 29' 50''$ west, latitude $47^{\circ} 44' 45''$ north. It is a picturesque island, whitened by long use as a bird rookery. It is 90 feet in height, 100 feet in breadth, and about 50 feet in thickness. It is barren of soil and is unclimbable.

Destruction island is off shore from the mouth of the Hoh river about three and one-half miles, in longitude $124^{\circ} 30'$ west, latitude $47^{\circ} 40' 20''$ north. The island proper covers about sixty acres; but its total area, including reefs at low tide, aggregates a little over a half a square mile in area. This island is covered over with a dense cap of Pleistocene deposits; gravel (and semi-conglomerate rock), clay, loam (composed in part of guano), in ascending series, the whole resting upon upturned, eroded sandstone of Oligocene-Miocene age. The reef areas are devoid of the Pleistocene cap, are extensive in area, and stand out above the surf at ebb tide as ridges and ribs of sculptured rock on all sides of the island. The island proper is so densely covered with grass, salal and salmon-berry bush and other low shrubbery that it is with difficulty that one is able to get about from one part of the island to another. On this island is located a government lighthouse and a life-saving station. It is a delightful place on which to live for one who cares not to have communication with the outside world but once in three months, when the government "light ship" makes its regular inspection tour. This island has many species of birds inhabiting it.

COPALIS ROCK RESERVATION.

Of the Copalis Rock reservation *Willoughby Rock* covers approximately three acres. It is off shore about one mile, longitude $124^{\circ} 21' 22''$ west, latitude $47^{\circ} 24' 40''$ north. It is 125 feet in height. It is capped with a metamorphic conglomerate rock, over which there is a thick earth-guano cap. It is climbable on the south, inaccessible on all other faces on account of its vertical walls. It is grassed over and is an excellent nesting place for birds.

Split Rock (which the Indian tradition says is the pair of tongs which the creator Kwatte hurled into the sea in his rage when his brother changed himself into a hermit crab), is about an acre in area. It is off shore about a mile, longitude $125^{\circ} 21' 45''$ west, latitude $47^{\circ} 24' 20''$ north. It is a barren double rock composed of conglomerate to metamorphic breccia of Cretaceous age. Its northern slope is covered with small holes that usually contain water. On the whole it presents a rough surface. In height it exceeds eighty feet. It is an elegant rookery.

Grenville Pillar is an unaccessible, grass-covered, earth-topped island of about a quarter of an acre in area, just off of Point Grenville (at Tohola), longitude $124^{\circ} 17'$ west, latitude $47^{\circ} 18' 20''$ north. It is perpendicularly walled, except at the north, where it is under-cut. Seven species of birds nest on it.

Grenville Arch is a large rock off shore about a half mile southwest from Point Grenville. It is conical-oval in shape, is perpendicular on the east and north and is sloping on the west and south. As the name signifies, it is tunneled through the middle part by a wide arch, said to be forty feet in height. Seven bird species also inhabit this island in summer.

Erin's Bride is off shore 300 yards. It is situated to the southeast of Point Grenville, in longitude $124^{\circ} 16'$ west, latitude $47^{\circ} 18'$ north. It is an unscalable, narrow rock. It is 125 feet in height and aggregates one-half acre in area. It is covered with fresh guano.

Erin islet is near the last, and off shore about 200 yards. In area it covers about two acres. It is 125 feet in height and is climbable only on its north side. On top it is curb-roof shaped, with top sloping east, west and north. On its earth cap grows a dense mass of wire grass.³

Besides the above-named islands and groups of islands, there are

3. Location and elevation of islands taken in the main from Coast and Geodetic Survey Chart No. 6400.

many unnamed points and rocks just at or above tide which serve as feeding ground for birds, also occasional nesting places.

The above island descriptions may prove tedious, but it is thought best to add them, that the reader may thoroughly understand the bird-life environments, and also have a definite idea as to where the islands and places mentioned are located.

In giving the species below, the islands inhabited by a named species will be given in succession, together with the estimated number of birds of that species nesting on each respective island, the total also being given at the close of the enumeration.

Unless otherwise stated, the birds mentioned in the list below are breeding residents. The number opposite the name of each respective species is the number of that species in "Handbook of Birds of the Western United States," by Forence Merriam Bailey.

BIRDS OF THE OLYMPIC PENINSULA, LISTED.

NOTE.—All measurements are in inches.

ORDER PYGOPODES: DIVING BIRDS.

Family PODICIPIDÆ: Grebes.

Genus *Æchmophorus*.

1. *Æchmophorus occidentalis* Lawr. Western grebe. Migratory. It occurs regularly along the coast in summer.

Description: Bill long and slender, tipped but not decurved, length five or more times the depth; head slender, without side crests; neck nearly as long as body; top of head and line down the back of the neck black; back slaty gray; under parts silvery white. When stretched for measuring it exceeds 27 inches from point of bill to toe tips.

Genus *Colymbus*.

2. *Colymbus holboellii* Reinh. Holboell grebe. Migratory. It visits the coast region in summer. Only a few of this species were seen by the writer.

Description: Head and bill about the same length; top of head greenish black to blackish black, often conspicuously crested; wings brown; back black; neck rufous; under parts washed with white or gray. Length about 20.

Subgenus *Dytes*.

4. *Colymbus nigricollis californicus* Heerm. Eared grebe. Rather common on the swamps up the river at LaPush. It is not known that they nest in the region. It is a pretty bird.

Description: A tuft of silky, yellowish, fan-shaped feathers on each side of the head; rest of head black; neck and chest black; back blackish; breast silvery white; sides brown. Length about 14.

Genus *Podilymbus*.

6. *Podilymbus podiceps* Linn. Pied-billed grebe; dadchink. Common, but not known to nest in the region.

Description: Bill stout and short, whitish, crossed by a black band; upper parts, chin and throat black to blackish; breast mottled gray ve-neered with a silvery gloss.

Family GAVIIDÆ: Loons.

Genus *Gavia*.

7. *Gavia imber* Gunn. Loon; great northern diver. Abundant in migration.

Description: Bill yellowish, upper ridge and top black to blackish horn color; crown, back and part of the neck pale brown to black, spotted with white; throat and sides of neck crossed by a series of white streaks; breast white. Length about 40. Female smaller than the male. Her under parts have a dirty yellowish tinge; she also has neither the streaked bands on her neck nor the white spots on her body that the male has. Tail feathers of both male and female are short and stiff; front toes fully webbed, hind toe small.

10. *Gavia pacifica*. Pacific loon. A migrant.

Description: Head and neck velvety, back of same whitish to smoky gray; throat black, with a greenish-purplish gloss; longitudinal white streaks show off the neck collar of black; back black, barred with four series of white streaks; lower parts white; tail feathers short and stiff; hind toe small; front toes fully webbed.

Family ALCIDÆ: Auks, Murres and Puffins.

Genus *Lunda*.

12. *Lunda cirrhata* Pall. Tufted puffin. Breeding resident.

Tatoosh Island, a few scattering pairs; Point of Arches group, 1000; Flattery Rocks proper, 2000; White Rock, 900; Carrol islet, 1100; Wishalooth, 1500; Doh-odaaluh, 100; Cake Rock, 800; Keeksoostahl, 1000; Dhuoyuatzactahl (Quillayute Needles group), 500; Round islet, 800; Alexander island, 8000; Willoughby Rock, 800; Grenville Pillar, a few scattering pairs; Erin islet, 3000. Total number, 21,500.

Description: This is a very picturesque sea bird, but shy and mostly a night bird in its movements. Its length is about 16 inches. Over each eye arises a tuft of whitish feathers about four inches in length. Bill high, much compressed, ridged transversely on the sides; bill strong and about as high as long. With this strong bill it crushes clams and other crustaceans on which it feeds; and, should it be captured, it will attack its captor with this beak with dangerous effect. I saw one cut a hole right through a coat as if it had been done with a pair of tin cutters. On account of the use of its beak in crushing things, together with the appearance of the beak, this bird has been termed "sea parrot." The upper parts of the body of this bird are sooty black; under parts dark gray; a fold of naked, reddish skin at the corner of the mouth; sides of face white, from which strip the silky yellowish-white crest above mentioned extends; feet and bill bright red; eyes white and conspicuous.

Nest: The nest is on the bare ground at the end of a burrow of some two feet in length. Not more than two eggs are laid. The young birds are ready to fly south about the first of September. Just before they were ready to fly in the year 1909, but after they had left the nest, a terrible wind storm and cold rain blew them into the charging surf and practically all the young perished.

Genus *Cerorhinca*.

15. *Cerorhinca monocerata* Pall. Rhinoceros auklet. A common resident of the island division.

Destruction island, 15,000, and a few scattering pairs on some of the other islands, make up the total number that nest in the region.

Description: Bill stout, much compressed, longer than deep, tip decurved, base with horn in breeding season; upper parts of body dusky; belly whitish; rest of under parts, throat and sides of head plumbeous; two series of white-pointed feathers flank side of head. Length of bird about 15.

Genus *Ptychoramphus*.

16. *Ptychoramphus aleuticus* Pall. Cassin auklet; Cassin's guillemot; Aleutian auk. Common island resident.

Tatoosh island, a few scattering pairs; Carrol islet, 3000; Quillayute Needles, 1000; Alexander island, 2000. Total number, 6000.

Description: In general description this bird is about the size of a pigeon. It is whitish of color, slightly tinged with blue; bill broader than deep at base; under parts white. Length usually about nine inches.

This is the gayest and briskest member of the auklet family. It steps nimbly along on its toes when on shore; hides among the rocks. When out at sea it swims and dives with alacrity. Its nesting place is in a natural, obscured cavity in some suitable place among the rocks that have fallen upon the beach of some island. They nest in pairs. The single egg laid is whitish of color, slightly tinged with blue.

Genus *Cyclorrhynchus*.

17. *Cyclorrhynchus psittaculus* Pall. Paroquet auklet. A migratory visitant. Rare.

Description: Bill without knob at base; bill thin, high, dark red in color; lower mandible curved upward; under parts white; rest of body, including throat patch, sooty black; from the lower eyelid of each eye there extends backward over each ear a thin, white crest.

Genus *Simorhynchus*.

20. *Simorhynchus pusillus* Pall. Least auklet; Little auk; sea dove; dove-kie. A rare migratory visitant.

Description: Bill with knob at base; crests of small, white feathers in front and back of eye; bird small, about the size of a dove; upper parts approaching black; under parts white to mottled or dusky; band of dark-colored feathers often across the breast.

Genus *Synthliboramphus*.

21. *Synthliboramphus antiquus* Gmel. Ancient murrelet; Black-throated Guillemot. A migratory visitor.

Description: This is a very handsome bird. Bill short and small; cutting edge of lower mandible convex; nostrils exposed; tarsus scutellate in front; under parts white; rest of body, head and neck black to slaty; strip of white, tassel-like filaments along back edge of crown, with sprinklings of same over back of neck; large white patch on each side of neck.

Genus *Brachyramphus*.

23. *Brachyramphus marmoratus* Gmel. Marbled murrelet. A numerous summer migrant. This is the most abundant migrant in July and August.

Description: In general, under parts white; upper parts dusky; upper parts barred with rusty brown; lower parts mottled with sooty brown. Length of bird about 10.

Genus *Ceppus*.

29. *Ceppus columba* Pall. Pigeon guillemont. An island resident in summer. Tatoosh island, a few scattering pairs; Carrol islet, 40; Destruction island, 36; Willoughby Rock, 20; Slit Rock, 12; Grenville Arch, 14. A total number of about 122.

Description: Feet pink in winter, red in summer; bill straight, slender, black; plumage black, except on base of wing, here a white patch incloses a black triangle. Length of bird about 14.

Genus *Uria*.

30a. *Uria troile californica* Bryant. California murre; Common, or Foolish, guillemot. A numerous island resident in summer.

Paahwoke-it, 300; Carrol islet, 1200; Jagged islet, 12; Willoughby, 400; Grenville Pillar, 800; Grenville Arch, 16; Erin islet, 30. Total number of murre, 2988.

Description: Under parts of body pure white; rest of plumage velvety sooty brown. Head rather small; a deep groove of feathers back of eye; nostrils concealed in feathers; bill slender, narrow. Bird about the size of a common duck.

Egg: The nest is the bare rock on which the egg is deposited. The egg is pear-shaped and much longer than a hen's egg. It is bluish green in color to yellowish green, with streaks and blotches of brown or black.

The young murre are ready to fly about the first of September. The young all perished in a storm mentioned above the latter part of August, 1909. When attacked, the mother bird will stay by her young till she is often captured. Sometimes she will shuffle herself over the rocks and drag her eggs with her; or, in case the hatched birds are nearly large enough to fly, she will shove them into the sea to save them. The Indians rob these birds' eggs; the gulls also destroy them. The young birds are also at the mercy of both the Indians and gulls. The nest is watched by day by one of the parents, by night by the other. The changing nest time is the scene of much quarreling and commotion.

Family LARIDÆ: Gulls and Terns.

Genus *Larus*.

42. *Larus glaucus* Brunn. Glaucus gull. A rare migrant.

Description: Back and top of wings, light pearl gray, rest of plumage white. Tail square across the end.

44. *Larus glaucescens* Naum. Glaucous-winged gull. An abundant island resident in summer. Many of the birds of this species stay in the region throughout the year.

Fuca's Pillar group, 800; Point of Arches group, 800; Father and Son, 150; Flattery rocks proper, 1000; White Rock, 800; Paahwoke-it, 10; Carrol islet, 1800; Wishaloolth, 4000; Jagged islet, 300; Doh-od-a-a-luh, 50; Cake Rock, 1500; James island group, 500; Quillayute Needles proper, 1000; Giants' Graveyard, 20; Round islet, 150; Alexander island, 100; North Rock, 20; Destruction island, 500. Total number of Glaucous-winged gulls, 13,500, + 5000 on the Strait of Fuca side; total, 18,500.

Description: Plumage same as No. 42 above, except quills are clear gray with white tips. Length of bird about 27.

Nest and eggs: The eggs are three in number. They are laid on the bare ground or rock surface. Sometimes, however, a makeshift of a nest is made for them. Nests are also had in grassy areas and among the seaweed.

The Western gull inhabits the southern half of the island groups, the Glaucous-winged gull the northern section. The commingling ground of the two species is in the vicinity of LaPush, Wash. The Indians rob these birds of their eggs and young. Birds of this species have been known to lay three settings of eggs in one season, in an endeavor to raise a brood. The government now protects the rookeries. With this protection the birds have begun to increase in numbers very rapidly.

49. *Larus occidentalis* Aud. Western gull. A resident both summer and winter, nesting on the islands in summer.

Tatoosh island, a few scattering pairs; Carrol islet, 75; Wishaloolth, 1000; Quillayute Needles, 12; Alexander island, 4; Destruction island, 20; Willoughby Rock, 150; Split Rock, 300; Grenville Pillar, 60; Grenville Arch,

100; Erin's Bride, 100; Erin islet, 10. Total number of Western gulls approximates 1832, + 1000 on the Strait of Fuca side; total, 2832.

Description: Mantle for the most part dark slaty gray. Length of bird 27.

Remarks to No. 44 above apply to this species also.

51. *Larus argentatus* Brunn. Herring gull. A migrant.

Description: Mantle a delicate pearl gray; red spot on terminal end of lower mandible, not otherwise spotted. Length of bird about 24.

52. *Larus vegæ* Palmen. Vega gull. A very rare migrant.

Description: Mantle a deep pearl, shading into a plumbeous gray. Size same as No. 51 above.

53. *Larus californicus* Lawr. California gull. An occasional stray migrant.

Description: Feet greenish; bill yellow, lower mandible red and black spotted near the end; mantle clear bluish gray. Length of bird about 22.

54. *Larus delawarensis* Ord. Ring-billed gull. Only one member of this species was seen:

Description: Color of mantle same as No. 44 above; that is, light pearl gray. The greenish-yellow bill is crossed near the end by a conspicuous black band; end of bill is tipped with yellow. Length of bird about 20.

55. *Larus brachyrhynchus* Rich. Short-billed gull. A rare migrant.

Description: Color of mantle same as last above; bill greenish, yellow tipped, short. Length of bird about 18.

56. *Larus canus* Linn. Mew gull. A migrant.

Description: Similar to No. 55 above, but with outer quills mainly black.

57. *Larus heermanni* Cass. Hermann gull. A migrant.

Description: Under parts dark gray; tip of tail, upper neck and head white; back sooty gray, bill bright red. Length of bird about 20.

60. *Larus philadelphia* Ord. Bonapart gull. Migratory.

Description: Upper parts delicate pearl gray; head and bill black; band across end of tail blackish. Length of bird about 14.

Family PROCELLARIIDÆ: Fulmars and Shearwaters.

Genus *Fulmarus*.

86b. *Fulmarus glacialis glupischa* Stejn. Pacific fulmar. A migrant.

Description: Bill stout, short; not as deep as wide at base; possesses nasal tubes extending about half the length of the bill; tip of bill and opening to nasal tubes yellow; under part of body bluish gray; rest of body, neck and head white. Length of bird about 19.

86.1. *Fulmarus rogersi* Cass. Ridger's fulmar. A rare migrant.

Description: This bird is similar to the Pacific fulmar above, except that its mantle is very much darker.

Genus *Puffinus*.

93. *Puffinus opisthomelas* Cous. Black-vented shearwater. A migrant.

95. *Puffinus griseus* Gmel. Dark-bodied shearwater. A migrant; rare.

Description: As is indicated by the name, the entire plumage of this bird is sooty gray to darker, as well as its feet and bill, the exception being its white under-wing coverts, which are also mottled at the tips.

Genus *Oceanodroma*.

- 105.2. *Oceanodroma kædingi* Anthony. Kæding petrel. An abundant summer resident in the island districts.

Carrol islet, 1000; Wishaloolth, 20,000; James island group, 200; Quillayute Needles proper, 40,000; Alexander island, 10,000; Destruction island, 100; Erin islet, 25,000. Total number, 96,300.

Description: Bill, feet and plumage black to sooty black, except upper and sides of lower tail coverts, white; wing coverts brownish; tail forked; bill weak and small, with nasal tubes elevated at tip. Bird about the size of a common blackbird. Length about 9.

When captured it ejects a bad smelling liquid from its nasal tubes, and thus defends itself with the bad odor.

Nests: The nest of this bird is on the bare ground at the end of a burrow it has made in a bank or in the peat among the wiregrass on some island. Sometimes the nests are lined with grass. The eggs laid are usually one. This is nearly always nearly plain white.

ORDER STEGANOPODES: TOTIPALMATE SWIMMERS.

Family PHALACROCORACIDÆ: Cormorants.

Genus *Phalacrocorax*.

- 120b. *Phalacrocorax dilophus cinctatus* Brandt. White-crested cormorant. An island resident in summer.

Father and Son, 30; Carrol islet, 130; Doh-od-a-a-luh, 30; Giants' Graveyard, 100; North Rock, 400; Destruction island, 100; Willoughby Rock, 50; Split Rock, 10; Grenville Pillar, 120; Grenville Arch, 100; Erin's Bride, 90. Total number, 1160.

Description: Back and wings slaty, neck feathers black, rest of plumage greenish black; throat pouch orange; a narrow crest of curved white feathers above and back of each eye. Length of adult bird about 33.

Nest: Nest is a mass of sticks and seaweed six inches or more in height. Usually five eggs are laid.

122. *Phalacrocorax penicillatus* Brandt. Brandt cormorant. An abundant summer resident of the island regions.

Paahwoke-it, 100; Jagged islet, 60; Grenville Pillar, 200. Total number, 360.

Description: Tail short, of 14 feathers; head not crested; neck and head glossy blue-black with brownish patch next to gular sack; body usually of a glossy greenish black color, with long yellow or white filaments along side of neck and shoulders; bill nearly straight, slender; throat pouch blue. Length of bird about 34.

The young of these birds are at the mercy of the hungry gulls.

Subgenus *Urile*.

123. *Phalacrocorax pelagicus* Pall. Pelagic cormorant. Migratory in this region.

Description: This is a much larger bird than No. 122 above. Head and body dark glossy green; neck rich purple; wings purplish green; tail and quills black; white patch on flank of each rump; loose white filaments on neck; head with purplish green crests; throat pouch dark red.

- 123b. *Phalacrocorax pelagicus resplendens* Aud. Baird cormorant. An abundant summer resident of the island region.

Tatoosh island, a few scattering pairs; Fuca's Pillar group, 1200; Point of Arches group, 300; Father and Son, 300; Flattery Rocks proper, 500; White Rock, 300; Paahwoke-it, 200; Carrol islet, 600; Wishaloolth, 100; Jagged islet, 150; Cape Johnson group, 100; Doh-od-a-a-luh, 120; Cake island, 150; James island group, 200; Quillayute Needles proper, 50; Giants' Graveyard,

120; Rounded islet, 250; Alexander island, 400; North Rock, 200; Destruction island, 300; Willoughby Rock, 1000; Split Rock, 10; Grenville Arch, 120; Erin's Bride, 120; Erin, 100; the Island of the Strait of Fuca on the American side, 1000. Total number, 7840.

Description: This bird resembles the Pelagic cormorant above, but is much smaller and has a much slenderer bill.

Nest: The nest is a pile of sticks on a flat rock, or in some protected crevice in the rock wall.

Family PELECANIDÆ: Pelicans.

Genus *Pelecanus*.

125. *Pelecanus erythrorhynchos* Gmel. American White pelican. A rare visitant. An Indian brought me the skin of one he had killed. I never saw one alive.

Description: Plumage mostly white; large pouch of naked skin, as a fish net, is attached to lower mandible and neck front. Length of bird nearly 6 feet.

127. *Pelecanus californicus* Ridgw. California Brown pelican. Only one individual of this species was seen. It was evidently a stray.

Description: Bird similar to No. 125 above, but brownish in color, with reddish pouch.

ORDER ANSERES: LAMELLIROSTRAL SWIMMERS.

Family ANATIDÆ: Ducks, Geese and Swans.

Genus *Merganser*.

129. *Merganser americanus* Cass. American merganser; sheldrake; water pheasant; diver; goosander; saw-bill, etc. A common summer resident. It nests in the up-stream regions, coming down the stream with the broods in the latter part of August. They sometimes stay all the year.

Description: This is a handsome duck, but coarse meated and poor flavored. Breast of male pale salmon-white in color; sides and neck white; tail and rump gray; middle of wing white, rest black; shoulders black; head and short crest a glossy greenish black. Upper parts of body of female bluish gray, except white on middle of wing; breast and chin white; head, neck and crest plumage light brown; bills of both sexes slender, with edges of mandibles armed with sharp, strongly recurved teeth.

These birds are good fishermen. They know how to drive the fish in places where they can catch them. Sometimes one bunch of goosanders will drive the fish toward another bunch of brother goosanders, and *vice versa*. Sometimes they will also fight over a fish. Their warning note is "Carr, corr." These birds are frequent visitors of the "lagoon" at LaPush.

130. *Merganser serrator* Linn. Red-breasted merganser. Not common.

Description: Head and crest a glossy greenish black; neck and middle of wings and belly white, the latter shading into cream color; rump and sides gray; back black; chest buffy brown.

Nest: The nest is placed a short distance from fresh water. It is made of dry weeds, sticks, moss and grass, and is lined with down from the breast of the female. The eggs vary from six to ten, are pale buffy in color to a dull yellow cream color, and measure about 2.5 by 1.6 inches.

Genus *Anas*.

132. *Anas boschas* Linn. Mallard. Common migrant both fall and spring; also breeds in the region, and occasionally winters in it.

The "quack, quack" of this bird is familiar to every one, the "quack" of the female being loud and short, that of the male duller. The conversational notes are "weck, weck"; the call note "waek, waek"; the alarm cry, "katch," or "rab, rab."

The nest is generally placed in a quiet, retired, dry spot, on the ground under a bush, or concealed by herbage. It is usually, also, placed near to some fresh water. The eggs are from 8 to 16 in number. They are somewhat elongated in shape, are hard, smooth-shelled, and of a pale olive to buffy green in color. The period of incubation extends over 28 days. Only the female sits on the nest.

Genus *Chaulelasmus*.

135. *Chaulelasmus streperus* Linn. Gadwell, gray duck. A migrant.

This is a gray duck resembling the mallards both in habits and appearance. It is prized by sportsmen on account of its gamy nature.

Genus *Mareca*.

137. *Mareca americana* Gmel. Baldpate: American widgeon. A migrant, also likely nests in the up-marsh regions.

Description: It receives its name "baldpate" from a large white strip which extends from the base of the bill up to and including the crown to the nape of the neck. Crown bordered with metallic green, rest of head and neck buffy over speckled with dusky; belly white; back barred with wavy lines of white, lavender, and black upon a dark gray background; sides and chest grayish lavender; bill blue, tipped with black. Length of bird about 20.

Nest and brood: The nest is placed upon the ground. It is composed of grass, leaves and down. The eggs are from 8 to 12 in number. They are a dull pale buff to a creamy, buffy white in color. They measure 2 by 1.5 inches.

The bird's call is "whew, whew, sweet."

Genus *Nettion*.

139. *Nettion carolinensis* Gmel. Green-winged teal.

This bird is distinguishable from the other teals by the wide crescent of green and black inclosing the eye and reaching to base of crest, also by its green wing.

Genus *Querquedula*.

140. *Querquedula discors* Linn. Blue-winged teal.

This bird is distinguishable from the other teals by its white crescent in front of the eye, also by its blue wing at base.

141. *Querquedula cyanoptera* Vieill. Cinnamon teal. A breeding resident.

Description: Wing with lesser coverts light blue; rest of plumage generally cinnamon brown in color, shading to dull brown on belly and blackish on crown and chin. This bird has sometimes been called the Red-breasted teal.

Nest: Its nest is on the ground, being built in swamp grass, near some stream, and lined with down. The eggs number from 8 to 12, and are of a creamy white color.

Genus *Spatula*.

142. *Spatula clypeata* Linn. Shoveller; spoonbill. A resident of the up-river regions. A common migrant both fall and spring. I have killed individuals of this species at LaPush in February.

Description: Bill long and shovel-like, with fine, comb-like teeth conspicuous along the sides when closed, black in color; neck and head black

to greenish black on back and sides; belly, chestnut; chest white, with white extending around the collar at base and backward over the back in two wide strips when wings are folded, inclosing a strip of dark; wing coverts barred with white, rest light blue; speculum green; scapulars streaked with white, black and blue; feet orange. Female mainly spotted and streaked with dusky brown.

At the beginning of the breeding season these two ducks are as pretty a pair of water birds as are seen in the region. In flight, this bird resembles that of the Blue-winged teal; in flavor, its flesh rivals the meat of the teal. Though this bird often visited the "lagoon" at LaPush, I rarely ever saw it in salt water, and then when compelled to resort thither.

Nest and young: The nest is usually placed in a tuft of herbage near some fresh water in a place difficult of access. It is composed of fine grass and carefully lined with down from the female's breast. The eggs are from 8 to 14 in number, and are a buffy white, tinged with green to olive-greenish in color.

Genus *Dafila*.

143. *Dafila acuta* Linn. Pintail. Breeds in the region, also a migrant.

Description: This is a long-necked bird with a sharp-pointed tail of 16 feathers. It is large of size. Its throat and under parts are white, also a white patch extends from the white under part of the neck upward in a narrow stripe toward the crown almost on a line with the eye, but extends only to the base of the crown; head not crested; purple glossy brown to blackish in color; sides and upper parts wavy gray; wing slaty, with a line of buff bordering the purple speculum. Female: Back and root of neck above black, rest of plumage in general being colored in various shades of brown; breast and belly being brownish white, interspersed with white; back and wings mottled with black, brown and buffy. Length of bird about 30.

Nest: The nest is well concealed. It is lined with grass and interlined with feathers. The eggs are about 10 in number, and are of a greenish olive buff, shading into a pale greenish color.

Genus *Aix*.

144. *Aix sponsa* Linn. (?) Wood duck. Said to visit the region occasionally, but was not seen by the writer.

Genus *Aythya*.

146. *Aythya americana* Eyt. Redhead. A visitant of the region.

Description: This duck is readily distinguishable from the other ducks on account of its whole head and neck being a bright reddish chestnut in color. As a further description: The feathers at the base of the tail and those of the tail are black; belly, chest and shoulders white; back gray, streaked with ash and black; bill as long as head, dull blue in color, with a black belt at end. Length of bird about 22.

147. *Aythya vallisneria* Wils. Canvasback. Breeds in this region.

Description: Head and neck rich chestnut brown to darker brown on crown and face; back and sides light gray; belly grayish shading into white; chest and shoulders black; tail gray; base of tail blackish. Length of bird about 23.

Subgenus *Fuligula*.

148. *Aythya marila* Linn. Scaup duck: Blue-bill; Big Black-head; Broad-bill; shuffler. Resident and migrant.

Description: Belly white; sides of belly light grayish; rest of plumage black to black glossed with green on head; short, wide bill is tipped with black, rest of bill blue. Female: Belly and region around base of bill whitish; rest of plumage brownish in color. Male in nonbreeding season a

dark brown, except on belly and at base of bill, which parts are whitish. Length about 20.

Nest not seen.

149. *Aythya affinis* Egt. Lesser Scaup duck. Migratory, and possibly a resident of the upper Olympic country.

Description: Similarly plumed as No. 148 above, except that the head is glossed with purple instead of green and that the gray lines on the side are a little more conspicuous. It also differs from the above in its being a smaller bird. Length 16.

Genus *Harelda*.

154. *Harelda hyemalis* Linn. Old-squaw. Migratory.

Description: Winter plumage: Dusky, ashy patch on side of head; middle tail feathers, back and breast black; rest of plumage white, shading into pearl gray on sides. Length about 22.

Genus *Histrionicus*.

155. *Histrionicus histrionicus* Linn. Harlequin duck. A summer visitor, visiting even the islands off the coast. It probably nests in the region also.

Description: This duck is characterized by its having a white collar, a white shoulder patch, a white patch in front of eye, one near the ear, and another running down the side of the crown nearly to the nape; all standing out from bluish-black-colored plumage surroundings.

Genus *Oidemia*.

Subgenus *Oidemia*.

163. *Oidemia americana* Swains. American scoter. I have seen this bird in July. September, however, is the time they are the most numerous.

Description: Bill swollen back of nostril; eyes brown; plumage black to sooty, without white markings. Length of bird 17.

Subgenus *Melannetta*.

165. *Oidemia deglandi* Bonap. White-winged scoter. A summer visitor, visiting even the islands off the coast as early as July. Great numbers of these ducks are to be seen on the "lagoon" at LaPush in September. It would seem from the numbers of young that are seen that they breed in the region, but I failed to ever find a nest.

Description: Eyes white, white eye patch on plumage extending backward from the eye taperingly toward the crown; wing speculum white; rest of plumage ranging from black to sooty. Length of bird about 20.

166. *Oidemia perspicillata* Linn. Surf scoter. This is a very common duck. I have seen it in all seasons of the year.

Description: Eyes white; bill swollen, white, red and orange yellow in male, black in female; white patch on back of head; triangular white patch on forehead; rest of plumage velvety black in male, sooty black to sooty gray in female. Length of bird about 20.

Genus *Erismatura*.

167. *Erismatura jamaicensis* Gmel. Ruddy duck. A breeding resident; also a migrant.

Description: Belly gray shading into silvery white; chin and cheeks white; top and back of head black; rest of plumage chestnut in color; bill bright blue, short and wide near end. Length of bird 14.

Nest: The nest is well hid among weeds and other water plants. It is composed of a mass of plant stems. Eggs numbering about 12, ranging from light buff to creamy in color.

Genus *Chen*.

169. *Chen Hyperborea* Pall. Lesser Snow goose. A common migrant.

Description: Wing with gray patch and black tip; rest of plumage pure white.

Genus *Anser*.

- 171a. *Anser albifrons gambeli* Hartl. White-fronted goose. A common migrant. On the 29th of August, 1906, 10,000 of these geese passed over LaPush, being driven southward in a storm. They were so low that I shot them from my front porch. They return northward in March and April.

Description: Tail coverts, posterior part of belly and face white; belly and sides spotted with black, or wholly black; rest of plumage dark gray; bill and feet orange, usually. Length of bird 30.

Genus *Branta*.

- 172a. *Branta canadensis hutchinsii* Rich. Hutchins goose. A common migrant. A settler at the Quillayute prairie killed 117 of these geese one winter.

Description: White band across the throat and neck; body of a deep gray; rest of plumage black. Length of bird 34. This bird resembles the Canada goose, but is smaller.

- 172b. *Branta canadensis occidentalis* Baird. White-cheeked goose. This is a common migrant.

Description: Cheeks white; throat patch between cheek patches black; rest of plumage practically similar to that of the Hutchins goose above.

- 172c. *Branta canadensis minima* Ridgw. Cackling goose. A common migrant. Length of bird 23.

174. *Branta nigricans* Lawr. Black brant. A migrant.

Description: Neck semi-encircled from the ventral side by a white band; anal region white; breast and head black, the former shading into slaty; rest of plumage sooty brown.

Genus *Philacate*.

176. *Philacate canagica* Sevest. Empire goose. An Indian killed the only specimen of the species I ever saw. He did not know what it was and brought it to me for identification.

Description: Tail, head and back of neck white; chin and throat brownish black; rest of plumage bluish gray; bill pinkish white. Length of bird 24.

Genus *Olor*.

180. *Olor columbianus*. Whistling swan. Common migrant. There are two pets, captives, at LaPush, one owned by Joe Pullen, one by Stanley Gray.

Description: Lores with small yellow spot; bill black.

Nest made of moss. Eggs usually 7, color a dull dirty white with brown markings, measuring 4 by 2.5 or more.

ORDER HERODIONES: HERONS, STORKS, IBISES, ETC.

Family ARDEIDÆ: Herons, Egrets, Bitterns.

Genus *Botaurus*.

190. *Botaurus lentiginosus* Montag. American bittern. Reported from the region, but not seen by the writer.

Genus *Ardea*.

- 194a. *Ardea herosias fannini* Champ. Northwest Coast heron. A breeding resident both on coast and islands (Destruction and Alexander islands).

Description: Upper parts bluish slaty black, under parts streaked with white and black; occipital crest and sides of head black, top white; edge of wings and thighs cinnamon brown; shoulders black streaked with white. Length of bird 45. Length of wing 20.

The bird is often said to be mostly legs, neck and wings. It has a piercing eye and is always on the lookout for intruders. When it sees anything out of the ordinary it utters a coarse warning note that will not only warn its kind but will scare up all the ducks in the vicinity. For this reason this is the first bird that hunters kill when entering a region to hunt. While it is in the region there will be no successful hunting.

Nest and eggs: The nest is placed on a tree or rock. It is composed of a large bed of twigs, more or less matted together with moss and weeds. It is usually some three feet in diameter. From three to six eggs are laid, each measuring 2.5 by 1.5.

ORDER PALUDICOLÆ: CRANES, RAILS, ETC.

Family RALLIDÆ: Rails, etc.

Genus *Rallus*.

210. *Rallus obsoletus* Ridgw. California clapper rail. Rare in salt-marsh districts.
212. *Rallus virginianus* Linn. Virginia rail (?). Not common.

ORDER LIMICOLÆ: SHORE BIRDS.

Family PHALAROPODIDÆ: Phalaropes.

Genus *Phalaropus*.

223. *Phalaropus lobatus* Linn. Northern phalarope. A summer migrant, visiting even the islands off shore as early as July.

Description: In habits this bird is essentially an aquatic bird. In appearance it resembles the sandpipers, but differs from them in the shortness of its tail and slenderness of its long, sharp bill. Plumage: Belly and throat white; sides of neck rufous; chest gray; rest of plumage mostly dark plumbeous, streaked with black and buff. Length about 8.

The calling note of this bird is a clear, sharp "tweet, tweet."

Genus *Steganopus*.

224. *Steganopus tricolor* Vieill. Wilson phalarope. A common migrant and likely a resident; these birds have been seen in full breeding plumage at LaPush.

Family SCOLOPACIDÆ: Snipes, Sandpipers, etc.

Genus *Tringa*.

Subgenus *Tringa*.

234. *Tringa canutus* Linn. Knot; Robin sandpiper. Common, visiting even the islands in July each year.

Description: This species is 10 inches long by 15 to 20 inches from tip to tip of wing. Under parts cinnamon; upper parts dusky gray, washed often with buff; tail coverts and rump white.

Subgenus *Actodromas*.

239. *Tringa maculata* Vieill. Pectoral sandpiper. Common, visiting even the islands in July each year.

Description: This bird is also known as Meadow snipe; Grass snipe; Jack snipe. Length about 9 inches. Plumage: Chest dark gray to dark gray streaked with dusky; upper parts mottled dusky or darker; rest of plumage white.

Subgenus *Pelidna*.

- 243a. *Tringa alpina pacifica* Coues. Red-backed sandpiper.

Description: This bird is about 8 inches in length and differs from the other sandpipers in having its back, crown and upper tail coverts bright, rusty ochraceous; sides and back part of belly white; chest grayish white; middle of belly black.

Genus *Ereunetes*.

247. *Ereunetes occidentalis* Lawr. Western sandpiper. An abundant migrant, returning southward in July, visiting also the islands off the coast.

Description: Under parts generally white in color; breast gray, spotted with dusky; sides same as breast; rest of plumage bright chestnut, mottled with gray, buff and black. Bird small.

Genus *Heteractitis*.

259. *Heteractitis incanus* Gmel. Wandering tattler. Common in summer, visiting also the islands off the coast in July and August each year.

Description: This is a bird of about 10 inches in length. Anal region pure white; throat white and dusky spotted; under parts barred with dusky and white; rest of plumage plumbaceous gray to slaty gray.

Genus *Numenius*.

265. *Numenius hudsonicus* Lath. Hudsonian curlew. A common migrant, visiting the region in July and August, extending its visits even to the islands off shore.

Genus *Ægialitis*.

Subgenus *Ægialitis*.

274. *Ægialitis semipalmata* Bonap. Semipalmated sandpiper. A common migrant.

Description: This bird resembles the killdeer but has shorter legs, is smaller and plumper; it has a heavy down under the feathers of the breast

that makes it appear plump and round. Throat encircled with a white collar above a black collar; face black; forehead and under parts white; rest of plumage brownish gray. Length of bird about 7.

278. *Ægialitis nivosa* Cass. Snowy plover. Common migrant.

Description: A bird about the same size as No. 274 above, but with longer bill, black; black spot on chest, one just above the ear, and a black patch across the front of crown; face and under parts white; upper parts and crown pale buffy gray. Length of bird about 7.

Family APHRIZIDÆ: Surf Birds and Turnstones.

Genus *Arenaria*.

233. *Arenaria morinella* Linn. Ruddy turnstone. Migratory in fall and spring; seen in July near the islands off the coast.

Description: Head variously streaked; back coarsely mottled with black and rufous; black band across the chest; rest of plumage white. Length of bird 9.

284. *Arenaria melanocephala* Vig. Black turnstone. Very common in migration, also breeding in the region (?). I have seen these birds on the Pacific islands off the coast in July; I have also seen hundreds of them in the vicinity of Protection island, in the Strait of Fuca, in August. They are very common all along the strait at that time of year.

Description: White spot in front of eye; spotted on sides and forehead with white; chest, neck, throat and all of head but crown black; back and crown of head black, washed with a greenish bronzy gloss; rest of plumage white. Length of bird 9.

Family HÆMATOPODIDÆ: Oyster-catchers.

Genus *Hæmatopus*.

287. *Hæmatopus bachmani* Aud. Black oyster-catcher. An abundant resident; also a migrant. It nests on the islands of both the strait and Pacific coast throughout the region.

Tatoosh island group, 10; Fuca's Pillar group, 20; Father and Son, 4; Flattery Rocks proper, 12; Carrol islet, 10; Wishaloolth, 10; Jagged islet, 8; Cape Johnson group, 14; Doh-odaaluh, 14; Cake Rock, 6; Quillayute Needles, 8; Giants' Graveyard, 16; Round islet, 4; Alexander island, 16; North Rock, 8; Destruction island, 16; Willoughby Rock, 4; Split Rock, 6; Grenville Pillar, 4; Grenville Arch, 2; Erin and Erin's Bride, 2 each; on the islands and headlands of the Strait of Fuca, 100. Total number, 294.

This is a bird of some 17 inches in length, or a little larger than a common pigeon. It has a straight, flattened, chisel-shaped, long red bill. Its plumage is blackish, ranging from bluish black on head to brownish black on body. Its food is principally sea mollusks and crustaceans.

LAND BIRDS.

ORDER GALLINÆ: GROUSE, QUAIL, TURKEYS, PHEASANTS, ETC.

Family TETRAONIDÆ: Grouse, Partridges, Quails, etc.

Genus *Bonasa*.

300c. *Bonasa umbellus sibini* Dougl. Oregon Ruffed grouse. Common resident.

Length 18 inches. Upper parts black to reddish rusty brown; tail deep rusty brown; under parts marked heavily with blackish, washed with buffy brown.

Nest hidden in a hollow tree or under a fallen tree top. Eggs usually 10 to 12, of a pinkish buffy brown to white streaked with brown.

ORDER COLUMBIDÆ: PIGEONS.

Family COLUMBIDÆ: Pigeons.

Genus *Columba*.

312. *Columba fasciata* Say. Band-tailed pigeon. Very common.

Description: Back of neck with a white collar; tail with a broad, two-inch, pale gray band bordered with black above; upper parts, including the head, purplish pink, fading to whitish on belly. Length of bird 16.

Nest usually on the ground. Eggs usually two, color white.

Food: The food of these birds in this region is salal berries, salmon-berries, huckleberries, thimbleberries, red elderberries, and other wild berries.

A flock of these birds had their homes in the Red alder thicket near where I had a potato patch last year. I often worked late in this patch. While at this work my notice was called to this bird's peculiar "hooting." It was a spirited "Hoop-ah-who," and then again a "Whoo-hoo-hoo, whoo-hoo-hoo," followed by an occasional "qho-ugh."

Genus *Zenaidura*.

316. *Zenaidura macroura* Linn. Mourning dove. Common.

ORDER RAPTORES: BIRDS OF PREY.

Family FALCONIDÆ: Falcons, Hawks, Eagles, etc.

Genus *Aquila*.

349. *Aquila chrysaetos* Linn. Golden eagle. I saw this bird only twice.

Description: Whole plumage dark brown, except tail, which is blackish and banded with a wide, grayish band. Length of bird 40; extent of width from wing tip to wing tip 7 feet.

Genus *Haliaeetus*.

352. *Haliaeetus leucocephalus* Linn. Bald eagle. Nests in the region, also on the islands, a pair nesting on Destruction island.

Description: Tail, tail coverts, neck and head snowy white; rest of plumage dark brown to blackish brown. Length 34, extent 7 feet.

Nest: The nest is composed of a bulky mass of weeds, sticks and vines, also turf, earthy rubbish, and moss and seaweed. Eggs: The eggs are two in number, of a bluish white color. They are each about the size of a goose egg. The young are at first covered with a cream-colored to whitish down which gradually changes into a bluish gray color.

Genus *Falco*.

365a. *Falco peregrinus pealei* Ridgw. Peale falcon. Common, nesting on the main land, also on James island, Carrol islet, and Destruction island.

Description: Head dark slaty, as is also the color of the rest of its upper parts, the tail and back of wings being barred also; chest marked with small black spots of almost tear shape; rest of under parts barred broadly in blackish. Extent of wing from tip to tip 12.

The nest of this bird is usually on some high cliff.

375a. *Falco columbarius suckleyi* Ridgw. Black merlin. Common, nesting on the mainland and on Destruction island.

Description: Throat white, streaked with black; rest of under parts blackish with whitish and tawny markings; tail tip whitish marked, rest of

tail black, but barred with three slaty whitish bars; upper parts blackish brown shading into slaty on tertials and wing coverts, and into bluish slate on tail coverts.

Subgenus *Tinnunculus*.

- 360a. *Falco sparverius deserticola* Mears. Desert Sparrow hawk. Common; nests on Destruction island, also on the mainland.

Description: Wings bluish gray shading into rufous gray; back and tail rufous, latter with black terminal band; top of head bluish, with rufous crown patch; cheeks with two black stripes. Length of bird about 11; wing about 8; tail 6.

Nests usually in hollow trees. Eggs usually 5, of a cinnamon buff to pure white, sprinkled or blotched with brown.

Genus *Pandion*.

364. *Pandion haliaetus carolinensis* Gmel. Fish hawk. Common.

Description: Head white streaked with blackish, with dark streak on side; breast blotched with brown; rest of under parts and neck pure white; tail narrowly tipped with white and barred with blackish bands; upper parts brownish to blackish brown.

Nest: The nest is usually built on a high tree. It is constructed of seaweed, rushes, moss, sticks, etc. Eggs 2 and 3, oblong in shape, of a grayish white color, speckled over with light reddish dots.

The food of this bird is fish.

Family BUBONIDÆ: Horned Owls, etc.

Genus *Syrnum*.

- 369a. *Syrnum occidentalis caurinum* Merriam. Northern Spotted owl. Rather rare.

Description: Head and neck coarsely spotted with round white spots upper parts in general a dark brown; under parts whitish to slaty white. Length of bird 19.

Genus *Nyctala*.

- 372a. *Nyctala acadica scotæa* Osgood. Northwest Saw-whet owl. Common.

Description: Legs, feet and flanks refescent; eye rings whitish; face heavily streaked with dark brown; under parts white, heavily streaked with reddish brown. Length of bird 8.

Nest usually in a hollow tree or a deserted woodpecker hole. Eggs usually about 7.

Genus *Megascops*.

- 373d. *Megascops asio kennicottii* Elliot. Kennicott Screech owl. Rare.

Description: Upper parts sooty brown, much mottled and streaked with black, as are the lower parts also; legs and feet mottled with buff over a rich buffy brown.

Genus *Nyctea*.

376. *Nyctea nyctea* Linn. Snowy owl. Common. Two were killed by Indians and brought to me for identification. Both were killed in the village itself.

Description: Color of plumage practically wholly white in the male, some darker in the female; both sometimes marked with spots and bars of slaty gray. Length about 22.

Genus *Glaucidium*.

389. *Glaucidium gnoma californicum* Scl. California Pigmy owl. This is a very common owl.

Description: Under parts white, chest washed with reddish brown, rest

of under parts streaked with dark brown; upper parts usually a rusty brown; tail brownish, barred with white; head speckled white over brown.

Nest: In a hollow tree or deserted woodpecker hole. Eggs, usually 4, white in color.

ORDER COCCYGES: CUCKOOS, ETC.

Family ALCEDINIDÆ: Kingfishers.

Genus *Ceryle*.

390. *Ceryle alcyon* Linn. Belted kingfisher. Common everywhere.

Description: Middle parts of tail, crest and upper parts of body bluish gray; nuchal collar and under parts white; blue-gray collar across the breast; tail black except middle part.

Nest: The nest is a burrow in the river bank or in the side of some bluff. The female usually lays from 6 to 8 white eggs. The young are kept in the burrow till quite large; then are taken out and taught to hunt for themselves.

At LaPush the crows and the kingfishers fight over the fish the kingfisher has been lucky enough to catch. As soon as the catch is made, a dozen crows will pounce upon the lucky fisherman and take his fish from him. But the crow pays for his fish. The kingfisher will follow the thieving crow and scold him till he tires out.

ORDER PICI: WOODPECKERS, ETC.

Family PICIDÆ: Woodpeckers.

Genus *Dryobates*.

393c. *Dryobates villosus harrisii* Aud. Harris woodpecker. Common.

Description: White stripe down the back; nape scarlet; upper parts generally black; wings lightly spotted with white; under parts light smoky brown. Length of bird 10.

This bird nests in the holes in the trees that itself has pecked out. Eggs usually white in color.

Genus *Sphyrapicus*.

403a. *Sphyrapicus ruber notkensis* Suckow. Northern red-breasted sapsucker. Common. (?).

Description: Back, wings and tail black, marked with white; belly olive-yellow; head, neck and chest all sometimes red; breast always a bright red. Length of bird 8.

404. *Sphyrapicus thyroideus* Cass. Williamson sapsucker. Rare, except in migration.

Genus *Ceophloeus*.

405. *Ceophloeus pileatus abieticola* Bangs. Northern Pileated woodpecker; cock of the woods. Seen only in migration.

Description: Entire top of head, malar stripe and occipital crest bright red; rest of head whitish sulphur-yellow; patches on wings white; feathers on belly tipped with whitish; rest of plumage generally grayish black.

Genus *Colaptes*.

413. *Colaptes cafer collaris* Vigors. Red-shafted flicker. Seen only in migration.

Description: "Mustache" and nuchal band red; rump white; tail black; general color of rest of body plumage, including head, brownish; under parts spotted with black; upper parts barred. Length of bird 14.

410a. *Colaptes cafer saturator* Ridgw. Northwestern flicker. A common summer resident.

Description: Similar to No. 413 above, but darker.

ORDER MACROCHIRES: GOATSUCKERS, SWIFTS AND HUMMING BIRDS.

Family CAPRIMULGIDÆ: Goatsuckers.

Genus *Chordeiles*.

- 420a.
- Chordeiles virginianus henryi*
- Cass. Western nighthawk.

Description: Tawny white bars alternating with black bars on under parts; upper parts generally light grayish buff.

This bird is very common.

Family MICROPODIDÆ: Swifts.

Genus *Cypseloides*.

- 422.
- Cypseloides niger borealis*
- Kenn. Black swift. Common both on the mainland and on the islands, especially Destruction and Tatoosh islands.

Description: Velvety area in front of eye; tail forked; plumage generally blackish or dusky. Length of bird 7.

Nest not seen by writer.

Family TROCHILIDÆ: Humming Birds.

Genus *Selasphorus*.

- 433.
- Selasphorus rufus*
- Gmel. Rufus humming bird. Common everywhere.

Description: General body color bright reddish to reddish brown; gorget, orange, brassy green and fire red. Bird about 4 inches in length.

ORDER PASSERES: PERCHING BIRDS.

Family CORVIDÆ: Crows, Jays, Magpies, etc.

Genus *Cyanocitta*.

- 478.
- Cyanocitta stelleri*
- Gmel. Steller jay. Common both as a resident and as a migrant.

Description: General color blackish blue shading into purplish blue on tail and wings and pale blue on belly and lower back. Length 12.

It is the handsomest jay I have yet seen, and about the noisiest. His "hollering" (squalling) is "chack-ah, chack-ah."

Genus *Perisoreus*.

- 485.
- Perisoreus obscurus*
- Ridgw. Oregon jay. Seen only in the middle Olympic mountain region.

Description: Forehead and under parts white; neck and top of head blackish; rest of upper parts brownish gray.

Genus *Corvus*.

- 486.
- Corvus corax principalis*
- Ridgw. Northern raven. Common at La Push, Mora, The Carn's Place and on Destruction island; but never numerous.

Description: Large bird, with large, heavy bill; a much larger bird than the eastern raven, but colored similarly; entire plumage black glossed with purple on upper parts, with dull greenish on belly.

Nest: In trees and on cliffs, composed of weeds, sticks and moss. Eggs about 7, pea green to olive, spotted with shades of brown.

486. *Corvus caurinus* Baird. Northwest crow. Almost as common as the common blackbirds in the eastern states, but confines its wanderings principally to the coast districts of the Pacific and inhabiting the islands off the coast also. They remain in the region throughout the year. It is believed safe to say that there are 100,000 of these birds in the region.

Description: This crow resembles the crow of the eastern states; but is smaller and smarter. In general its plumage is all black, but glossed with dull violet on upper parts.

Nest: In a crotch of some tree. It is made of fine sticks and mud, and is lined with the inner fibers of cedar bark. Eggs usually 5 to 8, ranging in color from olive buff to pale bluish green, also more or less spotted with gray and brown.

This crow will go into the hen house and steal all the eggs and little chickens. It will come in the house and steal even off of the table where cooking is going on if the windows and doors are open. One crow watches while the rest steal. A coarse "caw" is a warning that there is danger. They are hard to shoot, especially in an Indian village, because they will always do their thieving near some house and will fly close to the house in leaving the premises. Being suspicious, they are also hard to poison. When anything as bait is put out they will fly around it and look at it; then one or two will taste it and fly away to some high place and await the effects. If no evil comes from eating the bait, or suspicious morsels, the testers will fly back and eat of it again; then all the crows will come and partake of the food. Consequently, when trying to poison this bird, the settler puts out bait unpoisoned several times till the crows get used to eating the certain food in the certain place. Then he takes the same kind of food and mixes poison with it and gives it to them, and they unsuspecting, eat it all and pay the penalty. But the crow is hard to kill even with poison. I took the Pacific sardine (smelt) and poured a dropper full of carbolic acid down the throat of each fish till I had a common pail of such "doctored" bait. This I put out for the crows, and they ate every fish and then sat on the fence waiting for more smelt fish. Not one bird was killed with the acid. Again I used arsenic with no better effect—the birds sat on the hillside and cawed; that was all. Again our agency doctor, Charles L. Woods, of Neah Bay, tried all the poisons in our government medical supplies on these birds, but with no deadly effect. Strychnine only would kill them. In stealing, one bird would draw the attention of the watcher while the other bird would snatch the coveted morsel. The same is true of their robbing a hen of her chickens. One crow would chase the hen while the other (or others) would seize upon the little ones. Also, in stealing feed out of the chicken trough in the hen yard, some of the crows would chase the chickens while the others snatched up the bits of bread and other morsels. In catching fish the crow will dart into the wave, the same as the gull does, and snatch up a fish; no doubt, having learned this trait from the gulls. The crow also shows his scheming ability in his securing the meat of the clam. He finds a clam on the beach, probably washed up by the wave. Immediately he seizes it and flies high up in the air over some hard surface with it. He drops it to break it open, then darts down with the speed of an arrow to get it before a sister crow gets it.

Family ICTERIDÆ: Blackbirds, Orioles, etc.

Genus *Sturnella*.

- 501b. *Sturnella magna neglecta* Aug. Western meadow lark. Common, but seldom mates and nests. Only a few times was it ever heard to sing. It is a regular migrant.

Description: Color of plumage similar to that of the Eastern meadow lark. Crescent on breast and spotting on sides black; yellow of throat spreading over cheeks; upper parts grayish brown streaked with buff and barred with black; under parts yellow. Length of bird 8.

The song note of this bird is "tung-tung-tungah-til'lah tung"; its alarm note "tuck"; anxiety note "tyar." It is in this bird's singing that it differs mostly from the Eastern meadow lark.

Family FRINGILLIDÆ: Finches, Sparrows, etc.

Genus *Coccothraustes*.

- 514a. *Coccothraustes vespertinus montanus* Ridgw. Western Evening grossbeak. Common at Soleduck Hot Sulphur Springs; elevation 3600 feet.

Description: Under parts and forehead bright yellow, the former shading into lemon yellow; crown, wings and tail black; rest of upper parts olive; white patch on wing.

Genus *Loxia*.

521. *Loxia curvirostra minor* Brehm. Crossbill. Common on mainland; also visits Carrol islet and Destruction island.

Description: General color of plumage dull red, shading to bright red on rump; under parts shaded with gray; tail and wings dusky. Length of bird 5. The bill is the distinguishing feature; the tips are crossed in adults.

522. *Loxia leucoptera* Gmel. White-winged crossbill. Common in the middle mountain district, at the Soleduck Hot Springs. Here they are very numerous and very tame. I have seen them eat off of a man's back, the man posing on purpose to see just how tame they were. They seemed to be totally fearless. To-day they were there and to-morrow they were gone, and again they would come in flocks.

Description: Similar in color of plumage to 521 above, but of a more rose red and occasionally tinged with yellow orange; wing with two white bands.

Nest not seen, as the writer's two trips at the springs were in August each year, after the breeding season was over.

Genus *Passer*.

- . *Passer domesticus* Linn. English sparrow. An occasional stray visits the region to the west of the Olympics; common on the "sound" side of these mountains.

Genus *Chondestes*.

- 522a. *Chondestes grammacus strigatus* Swains. Western Lark sparrow. Common.

Description: Tail blackish brown with white corners; under parts white; upper parts of body brownish gray, streaked with blackish; head streaked with black and white, with chestnut patch on sides. Length of bird 6.

Nests in the region, but nest not seen by the writer.

Genus *Zonotrichia*.

557. *Zonotrichia coronata* Pall. Golden-crowned sparrow. Common in migration.

Description: Head striped; central stripe yellow in front, ash gray behind; rest of head stripes black; under parts generally gray; upper parts of body generally olive brown, streaked with black and blackish brown; tail and rump plain; wing banded with two white bands. Length of bird about 7.

Family TROGLODYTIDÆ: Wrens, Thrashers, etc.

Genus *Olbiorchilus*.

- 722a. *Olbiorchilus hiemalis pacificus* Baird. Western Winter wren. Resident throughout the year, breeding, also, on the islands off the coast. The "scolder," called in the Quileute language "cho-cho."

Description: Upper parts dark brown, sometimes narrowly barred with black; belly and under tail coverts barred; breast and throat tawny; flanks darker.

Nest: The nest is usually in hollow chinks in dead logs and stumps. It is made of moss and shreds of the inner bark of trees and is lined with feathers. The eggs are usually 7 in number, minutely but sparsely spotted with reddish brown over a creamy white.

Wherever you go in the woods this bird is always present and is hopping about from log to log and from underbush to underbush as he keeps up a continual scolding chirp.

Family CERTHIIDÆ: Creepers.

Genus *Parus*.

Subgenus *Parus*.

- 735b. *Parus atricapillus occidentalis* Baird. Oregon chickadee. Common resident, an abundant migrant.

Description: Tail not long; under parts generally white; back dark gray, sometimes washed with olive brown; sides tawny brown; sides of head white; top of head, also back of neck, a shiny black. Length of bird about 5.

741. *Parus rufescens* Towns. Chestnut-backed chickadee. But two individuals of this species were seen.

Description: This bird is easily distinguishable from the other chickadees by its back, sides and flanks being reddish brown; under parts white; sides of head white, top of head and upper part of neck brown; throat blackish brown.

Family SYLVIIDÆ: Kinglets, Gnatcatchers, etc.

Genus *Regulus*.

- 748a. *Regulus satrapa olivaceus* Linn. Ruby-crowned kinglet. Common.

Description: Under parts dirty white; upper parts grayish, washed with greenish on rump; crown bright red; feathers of upper parts with yellow edges. Length of bird about 4.

Family TURDIDÆ: Thrushes, Solitaires, Bluebirds, etc.

Genus *Hylocichla*.

758. *Hylocichla ustulata* Nutt. Russet-backed thrush. Common, breeding both on the mainland and on the islands.

Description: Upper parts russet color; tail a brownish olive brown; chest pale whitish; under parts white; sides white, washed with olive brown; eye ring buffy; sides of head tawny; upper parts more or less spotted. Length of bird about 7.

Nest: The nest is composed of moss and shreds of bark. It is usually in some marshy place in some small tree. The eggs are about 5 in number, spotted with rusty brown over blue to greenish blue.

Genus *Merula*.

- 761a. *Merula migratoria propinqua* Ridgw. Western robin. Common.

Description: Hind neck, tail, head and wings black to blackish; rest of

upper parts slaty gray; throat black; rest of under parts generally rufous. Length of bird about 11.

Eggs, usually 4, greenish blue in color.

Genus *Spizella*.

360a. *Spizella socialis arizonæ* Cous. Western Chipping sparrow. Common.

Description: Forehead and eye stripe black to blackish; sides of head dull gray, top rufous, with an occasional median line of ashy color, white line from bill passing to nape above the eye; back brownish to pale buffy; under parts white to ashy white. Length of bird about 5.

Genus *Junco*.

567a. *Junco hyemalis oregonus* Towns. Oregon junco. Common at coast in winter; common in the mountain districts in summer, spring and fall.

Description: Middle of back dark brown; sides pinkish brown; neck, head and chest black, or nearly so; under parts of body white. Length of bird about 6.

Genus *Melospiza*.

581e. *Melospiza melodia morphna* Oberh. Rusty Song sparrow. Common.

Nests everywhere, even on the islands of Tatoosh, Carrol and Destruction, also James island. The Indians call it "Hus-hus" or "Hus-hos."

Description: Upper parts rusty olive streaked with obscured black streaks; flanks olivaceous; chest wavy rufous.

Genus *Passerella*.

585a (note). *Passerella iliaca fuliginosa* Ridgeway. Sooty Fox sparrow.

This sparrow is very common, nesting both on the mainland and on the islands (Tatoosh, Alexander, Carrol, Destruction and James islands).

Description: Upper parts dark reddish brown, mixed with dark slaty gray; dark foxy to dark brown on tail, rump and wings; under parts white to a dirty white color, marked with large triangular dark brown spots that converge on the breast. Length of bird about 6.

Nest: The nest is made in the crotch of some shrub three or four feet above the ground in some thicket. It is usually composed of moss and leaves.

Eggs: The eggs are speckled and blotched with brownish lilac over a general bluish-grayish green.

Genus *Pipilo*.

588b. *Pipilo maculatus oregonus* Bell. Oregon towhee. Common.

Description: General color of upper parts mainly black, inconspicuously marked with white, especially on wings; very little white on outer tail feather; belly white; sides dark rufous. Length of bird 7.

This bird is quite shy and hides its nest far back in the woods. I hunted many times for its nest, but failed to find it. The bird itself makes a mew-ing sound like a cat as it flutters from bush to bush to draw one away from its young.

This bird is sometimes called chewink, towhee bunting and marsh robin.

Family HIRUNDINIDÆ: Swallows.

Genus *Hirundo*.

613 (note). *Hirundo erythrogastra palmeri* Grinnell. Western Barn swallow. Common everywhere along the coast and on the islands.

This bird is similar in color to the common barn swallow, but with a smaller bill and longer wing and tail.

613. *Hirundo erythrogastra* Bodd. Common Barn swallow. Breeds throughout the region in the cliff regions of both the islands and on the mainland.

Description: Tail much forked; upper parts glossy steel blue; forehead dark brown; under parts tawny brown. Length of bird about 7.

Nest: The nest is a bowl-shaped wall pocket made of mixed straw and mud and lined with feathers. Eggs are usually about five in number, are brown and lavender speckled over white.

Genus *Tachycineta*.

614. *Tachycineta bicolor* Vieill. White-bellied swallow. Common.

Description: Upper parts steel blue; under parts pure white.

Nest: This bird's nest is usually in hollow trees. Eggs usually 5, color white.

615. *Tachycineta thalassina lepida* Mearns. Northern Violet-green swallow. Very common.

This bird is easily distinguishable from the other swallows by its violet-green plumage of upper parts; under parts white.

Nest: The nest is on cliffs, under the eaves of houses and in hollow trees. A colony has its home under the eaves of the agency house at LaPush. The nest is lined with feathers; and, in case it is built under the house eaves, it is otherwise made like the nest of the Barn swallow above. The eggs are about 5 in number, white in color.

Genus *Riparia*.

616. *Riparia riparia* Linn. (?) Bank swallow.

Genus *Stelgidopteryx*.

617. *Stelgidopteryx serripennis* Aud. Rough-winged swallow. Common both on the mainland and on the islands of the Pacific front.

Description: Under parts dirty gray to white on belly; tail coverts white; upper parts dull grayish brown; wing saw-toothed to roughened on edge. Length of bird about 5.

Nest: The nest is usually in holes in banks. Eggs about 6, white in color.

Family LENIIDÆ: Shrikes.

Genus *Lanius*.

- 622a. *Lanius ludovicianus excubitorides* Swains. White-rumped shrike; camp thief; camp robber; butcher bird. Common. An Indian at LaPush kept one of these birds in a cage.

Description: Upper parts light slaty gray to whitish on upper tail coverts; under parts white; bill and beginning of front of head black.

Nest not seen.

Family MNIOTILTIDÆ: Wood Warblers.

Genus *Helminthophila*.

- 646a. *Helminthophila celata lutescens* Ridgw. Lutescent warbler. Common; nesting on both the islands and the mainland.

Description: Under parts bright greenish yellow; upper parts bright olive green.

Genus *Dendroica*.

652. *Dendroica æstiva* Gmel. Yellow warbler. Common, nesting on both the mainland and the islands.

Description: Upper parts yellow to tinged with orange on crown; under parts streaked with rufous.

656. *Dendroica auduboni* Towns. Audubon warbler. Common on both islands and mainland.

Description: Upper parts generally bluish gray, streaked with black; under parts yellow, white and black; rump, throat patch and crown yellow. Length of bird about 5.

Eggs usually 4, of an olive-greenish to an olive-whitish color.

Genus *Sialia*.

767. *Sialia mexicana occidentalis* Towns. Western bluebird. Common.

Description: Throat purplish blue; upper parts dark purplish blue, shaded sometimes into chestnut; breast rufous; rest of under parts of body mixed gray, brown and dull purplish. Length of bird about 7.

Nest: The nest of this bird is usually in abandoned holes of the woodpecker. The eggs are pale blue, six in number.